

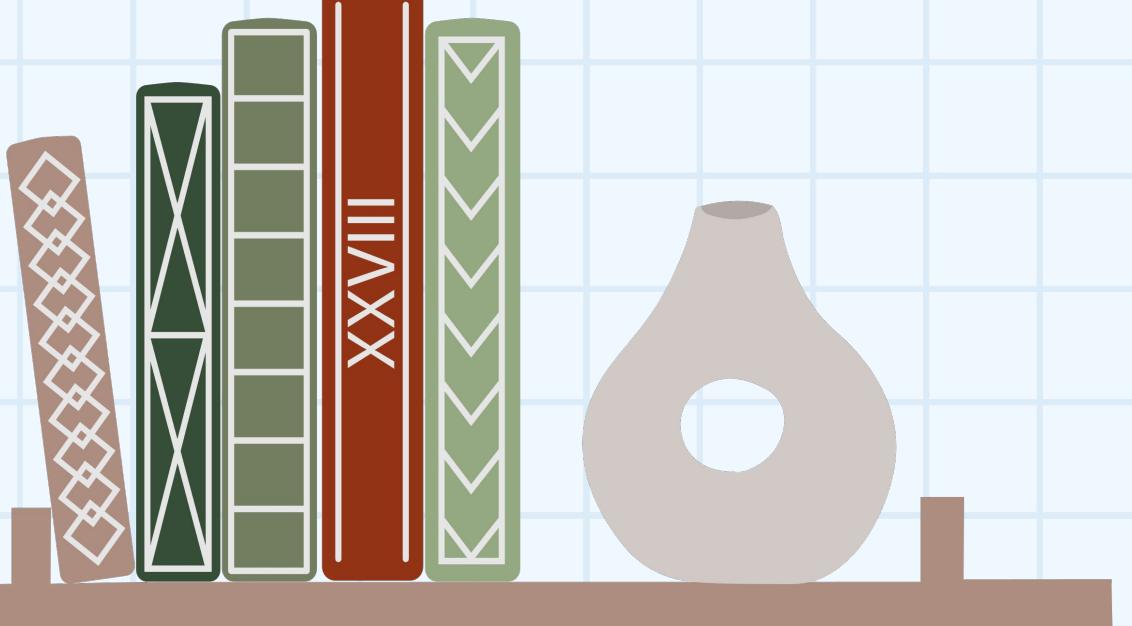
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# BS./BSC.IN

## Applied AI and Data Science

# Basics of Data Analytics



# Let's dive into and learn:



1

## Gathering Data



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# Gathering the data



- After identifying the data you need, we need to gather the data that may be spread over different sources such as databases, web, sensors and other sources of data for specific needs.



# Gathering data through SQL

- SQL or Structured Querying Language is a querying language used for extracting information from relational databases.
- SQL is used to give commands to specify
  - What to be retrieved from the database
  - Table from which to be extracted
  - Identifying matching records
  - Deciding how to display the query results



# Gathering Data through NoSQL

- Data from Non-Relational databases can be gathered through NOSQL query tools
- Some non relational databases can come with their own query tools

# Application Programming

- APIs are popularly used to gather data from a variety of web related interfaces
- Invoked from applications that require the data
- To access a facility that contains the data e.g. databases, web services and marketplaces
- Often used for data-validation purposes



# Web Scraping



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- Collecting data from web pages based on some defined features
- Gather a wide variety of data e.g. text, images, videos, audios and more
- RSS feeds for capturing updated data from online forums and news sites where data is updated continuously

# Data Streams



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- Data can also be gathered from data streams which aggregate constant streams of data
  - Sensors and similar instruments
  - IoT devices
  - Applications
  - GPS from cars
  - Social media platforms

# Data Exchange Platforms



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- Third-party data exchange platforms allow exchange of data between data producers and data consumers
- Pre-defined structure, formats, terms and conditions for exchange

# Other Data Sources



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- Third-party market research companies for market trends and ad spending
- Research and Advisory firms
- Other firms for mobile and web usage data, demographic and consumer surveys

# Recap



Different ways of gathering data based on  
your identification of the relevant data for your  
project



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# Thank you

